MIAMIBEACH

OFFICE OF THE CITY MANAGER

NO. LTC # **090-2016**

LETTER TO COMMISSION

TO: Mayor Philip Levine and Members of the City Commission

FROM: Jimmy L. Morales, City Manager

DATE: March 3, 2016

SUBJECT: **KIMLEY-HORN AND ASSOCIATES, INC. CONSULTANT SERVICE ORDERS**

The purpose of this LTC is to advise the Commission of the status of the Consultant Service Orders (CSO) related to the agreement between the City of Miami Beach and Kimley-Horn and Associates, Inc., for the preparation of Environmental Analysis for Miami Beach transit projects including the Beach Corridor Transit Connection Project and related services, pursuant to Request For Qualifications (RFQ) No. 2015-213-KB

BACKGROUND

At the December 9, 2015 Commission meeting, the Mayor and City Commission approved the Resolution authorizing the Mayor And City Clerk to execute an agreement between the City of Miami Beach and Kimley-Horn and Associates, Inc., (referred to as "the KH Team") for the preparation of Environmental Analysis for Miami Beach transit projects including the Beach Corridor Transit Connection Project and related services.

The services to be provided support the City staff in all aspects of advancing and implementing the "Preparation of Environmental Analysis for Miami Beach Transit Projects, including the Beach Corridor Transit Connection Project and Related Services."

The general services to be rendered by the KH Team will fall under the two main headings as outlined by the City:

1. Developing the scope and deliverables of the desired environmental analyses and documents in order to expedite the implementation of the Miami Beach Transit Projects, including the Miami Beach Component of the Beach Corridor Transit Connection Project; and
2. Reviewing and evaluating proposals, and developing agreements and supporting documentation resulting from proposals, both from a technical and financial perspective, including Public-Private Partnership (P3) proposals.

The agreement provides for the KH Team to provide the services set forth below through separately negotiated and executed CSOs with compensation budgeted in the CSOs, and the cost determined based on estimated hours to complete the scope of work and pre-determined hourly rates set forth in the agreement.

At the January 9, 2016 Commission meeting, the Mayor and City Commission approved a capital budget amendment that provided up to $10 million for the Environmental Review, Preliminary Engineering, and P3 Procurement for the Miami Beach Light Rail/Modern Streetcar

project. However, the Commission directed that this authorization was for budget purposes only and that the Commission should be advised of amounts authorized for these tasks.

STATUS UPDATE

In order to quickly expedite the project, provide support needed for issuance of the solicitation, and technical support of the City's position in presentations to the County and MPO staff and officials, the City issued CSO#1 for "Pre-Planning Activities" (Attachment 1). CSO #1 was issued December 17, 2015 in an amount not to exceed $437,215 to be based on actual hours expended and the rates approved in the contract agreement authorized by the City Commission. Pre-planning activities included the following:

- Task1: Preliminary Corridor Assessment – Preliminary Project Definition, including
  - Review previous studies, Perform Field Review, Analyze Route termini, Storage Locations and Maintenance Storage Facility, Evaluate Transit Technologies, Evaluate Transportation Conditions and Issues, Evaluate Environmental Conditions, Evaluate Community and Social Issues, Develop Preliminary Constraints and Alignment Map, Develop Summary Report, and Prepare Outline for Basis of Design and State Environmental Impact
- Task 2: Preliminary Finance and P3 Procurement Activities, including
  - Outline for P3 Procurement Process/P3 Delivery Methods
  - Notice and Proposal Requirements Document for P3 Procurement Qualifications, including assisting the City with the Issuance of the Proposal Requirements Document as part of the Unsolicited Proposal Process
  - Preparation of materials and participation in the mandatory pre-proposal meeting and One-on-One Proposer meetings
  - Preliminary review of Funding Options
- Task 3: Start-up Coordination and Strategy Meetings, including
  - Project definitions meetings with staff, regulatory agencies, etc.
  - Support to the MPO and Miami-Dade County in developing an approach for parallel development of the Miami Beach Light Rail/Modern Streetcar project and the re-defined Beach Corridor Transit Connection Project, resulting in the Policy Executive Committee endorsement of the two parallel projects

Tasks completed or underway related to CSO #1 include the following:

- Corridor Assessment – Preliminary Project Definition: Performing a series of activities to initiate the environmental analysis and assessment of the proposed corridor, including analyzing, evaluating and documenting the full loop alternative. Activities performed to date include:
  - Review of previous studies, as-built plans, and franchise agreements with private utilities
  - Analysis of potential maintenance and storage facility locations
  - Identification potential manufacturers of off-wire vehicles
  - Preparation of GIS mapping of project corridor and prominent features and preparation of base map
  - Preparation of project description summary sheet
  - Outlines of Project Development and Engineering, and Environmental Compliance Documentation required for project
  - Documentation for transmittal to Miami-Dade County and Florida Department of Transportation to define how the Miami Beach Transit Project can advance

without harming the opportunity for federal funds for the Beach Corridor Transit Connection project
    - Support to the MPO and Miami-Dade County in developing an approach for parallel development of the Miami Beach Light Rail/Modern Streetcar project and the re-defined Beach Corridor Transit Connection Project
- Preliminary Finance and P3 Procurement Activities: Supporting the City in several early-on P3 Procurement and Finance activities. Activities performed to date include:
    - Industry Outreach – Members of the City's Consultants reached out to the P3, construction, engineering and LRT/Modern Streetcar industry prior to issuance of the procurement documents to encourage participation in the procurement process. This occurred at national meetings such as the Transportation Research Board annual meeting and other outreach with a wide range industry members that is reflected in the strong participation at the Pre-Proposal Meeting and in One-on-One sessions.
    - Research regarding the applicability of Federal Transit Administration's Program of Interrelated Projects as a strategy for City of Miami Beach transit project; serving as a local match to Beach Corridor Transit Connection project.
    - Support for development of the procurement documents, Pre-Proposal Meeting and One-on-One meetings.
    - Development of a Project funding plan and financial plan. This includes identification of very preliminary Project cost and the screening of funding options for the Project that will be covered in upcoming briefings for the Mayor and Commissioners.
- Start-Up Coordination and Strategy Meetings
    - Working with Miami-Dade County to discuss applicability of FTA Program of Interrelated Projects
    - Discussion for potential locations for intermodal hub along Alton Road and 5th Street
    - Preparation of presentation and support for the MPO Policy Executive Committee meeting for the Beach Transit Connection project, resulting in the Policy Executive Committee endorsement of the two parallel projects (Miami Beach transit project and Beach Transit Connection project)
    - Staffing the P3 pre-proposal meeting and one-on-one proposer meetings
    - Discussion of requirements for topographic survey and subsurface utility exploration (SUE) along the project corridors
    - Development of the preliminary project schedule in Microsoft Project format
    - Research of comparable transit projects to determine range of costs for project development and environmental studies as a share of construction costs

During that time, the City has been negotiating with the KH Team for the work needed for the Environmental Review, and has negotiated the CSO #2: Survey, Subsurface Utility Engineering (SUE), and Limited Geotechnical analysis for the Miami Beach Light Rail/Modern Streetcar Project in an amount Not-to-Exceed $1,321,549; and CSO#3: Preparation of Environmental Analysis for the Miami Beach Light Rail/Modern Streetcar Project in an amount not to exceed $4,863,548. Per Commission direction at the January 13, 2016 Commission meeting where the budget for the Environmental Review and P# Procurement was discussed, the Commission gave direction that the budget appropriation of $10 million that they were approving was a place holder and they wished to be informed of actual amounts to be authorized by the City Manager. The detailed CSO's in Attachments 2 and 3 provide detailed descriptions of the tasks associated with these CSOs and further perspective is provided below, including a breakdown

of tasks by each member of the KH Team.

CSO #2: Survey, Subsurface Utility Engineering (SUE), and Limited Geotechnical Analysis for the Miami Beach Light Rail/Modern Streetcar Project

Under this CSO topographic roadway survey and the location of existing underground facilities (water, sanitary sewer, storm water, power, gas, communications, and other underground facilities) will be determined.

The subsurface data obtained is used to identify conflicts with the proposed tracks, develop relocation designs, facilitate coordination with utility providers, and potentially avoid conflicts through adjustment of the track alignment. Varying levels of existing information are currently available through City GIS databases and from private utility record drawings. Unfortunately, this data is somewhat unreliable and does not provide sufficient accuracy to determine conflicts and potential relocation design resulting from the introduction of in-street tracks. It is typical for streetcar and light rail projects to include a comprehensive data collection program for utilities.

The KH Team will utilize three-dimensional topographic imaging radar (3D scanning) collected continuously throughout the entire scan area to provide a higher accuracy collection of subsurface data, providing for the creation of a true 3D existing utility maps, depicting known, unknown and abandoned facilities. Using the data collected from 3D scanning, the team will prepare an AutoCAD Civil 3D pipe network model for use in preliminary and final design. By collecting comprehensive, continuous, and accurate horizontal and vertical information at this early stage of the project, the amount of soft digs which are typically performed later in the process is reduced by approximately 90%, and saves valuable time later in design.

By collecting better subsurface data earlier in the process, we can realize the following benefits:

- Accelerate schedule and realize cost savings from eliminating second round of utility data collection (soft digs)
- Cost savings through utilization of more accurate data to modify track alignment and avoid significant conflict altogether
- Minimizes disruption to the public from soft digs
- In a P3 procurement, providing utility data with a higher level of accuracy will allow the concessionaires to reduce contingency that would otherwise be included in their Guaranteed Maximum Price (GMP). Relocation of underground utilities resulting from discovery of unforeseen conditions is the most common source of change orders and claims in streetcar construction. Any amount of reduction in this risk to the concessionaires will result in significant savings in the ultimate availability payment amount.

Of the $1,321,549 to be authorized under CSO #2, 97 percent ($1,288,339) will be allocated to their survey sub-consultant Craig A. Smith and Associates.

More details are provided in the attached letter from the KH Team (Attachment 4).

CSO#3: Preparation of Environmental Analysis for the Miami Beach Light Rail/Modern Streetcar Project

The project must undergo an environmental study and review in order to meet the required standards to receive the necessary approvals. Whether we follow the State of Florida Environmental Impact Report (SEIR) guidelines or the Federal National Environmental Policy Act (NEPA), the guidelines to assess and measure the project's environmental, social, physical, and capital and operating cost impacts are similar. The environment studies are required to begin with the Project's definition. The definition includes items such as the project's alignment, station locations, terminals, operations, right-of-way requirements and underground utility location and conditions.

State or Federal approval requires preliminary engineering to the level "necessary to complete NEPA and receive State or Federal approval," or more specifically "up to 30% design plans" depending on the complexity of the item or section being studied. For Federal and State environmental studies, the expectation is that the preliminary engineering phase will result in defining a project to the point where little change will be necessary, thereby requiring a project with well-defined alignment, stations, terminals, needs for right-of-way acquisition, vehicle and system configurations, and operating profiles, allowing for more clearly defining costs, benefits, impacts, and reduced financial risks. The CSO anticipates that preliminary design will be up to 15%, except for more complex components requiring further engineering.

This level of project definition will have expectations clearly defined up front and the need for change orders is limited. A better defined project typically leads to a "better price" by reducing unknown risks associated with the project, and enhancing opportunities for innovation in finance and in design. In addition, the concessionaire proposals would be based on similarly "baselined projects" and more easily compared and evaluated.

In summary, preliminary engineering is required by law to achieve necessary environmental approvals on this type of infrastructure. Of similar importance, preliminary engineering leads to a project that would better reflect City and community values and expectations. Elements such as design, aesthetics, layout and any components associated with sea level rise are elements that are defined in the preliminary engineering phase of the project. A better defined project developed through preliminary engineering is a means of ensuring these considerations are met.

The tasks to be developed under this CSO include:
Task 1 - Project Development and Engineering
Task 2 - Environmental Compliance / Documentation
Task 3 – Public Outreach – Development of a Public Involvement Plan
Task 4 - Project Funding Plan

The breakdown of tasks among the project team is as follows:

Firm	Fee [1]
Kimley-Horn	$1,763,135
HDR Engineering	$1,442,565
WSP/Parsons Brinckerhoff	$347,597
LTK Engineering	$510,489
Clary Consulting	$120,014
Boothe Transit Consulting	$75,285
Maintenance Design Group	$127,787
Shiels Obletz Johnsen	$104,025
Communikatz	$4,170
Media Relations Group	$4,096
Janus Research	$72,818
Government Services Group	$141,568
Traffic Counts (Direct Expense)	$150,000
Total	$4,863,548

CSO #4 P3 Procurement

The scopes of services for and Evaluation of Proposals for the Miami Beach Light Rail/Modern Street Car Project is in the process of being developed and will be transmitted via LTC once those negotiations are complete. These will be authorized through a separate CSO #4, as outlined in the attached Kimley-Horn and Parsons Brinkerhoff Agreement Letter dated February 5, 2016 (Attachment 5).

Similarly, once Development of a Public Involvement Plan is completed under Task 3 of CSO #3, a separate CSO will be issue for implementation of the Public Involvement Plan.

JLM/MT/KGB/JRG

Attachments

1. CSO #1
2. CSO #2 with supporting Hours by Task and by Firm
3. CSO #3 with supporting Hours by Task and by Firm
4. Kimley-Horn Parsons Brinkerhoff Agreement Letter dated February 5, 2016
5. Kimley-Horn Letter dated February 12, 2016

Kimley»Horn

December 17th, 2015

Jose Gonzalez
Director of Transportation
City of Miami Beach
1700 Convention Center Drive
4th Floor (with Public Works)
Miami Beach, Florida 33139

Re: Professional Services Agreement, Consultant Service Order #1
South Beach Light Rail/Modern Streetcar Project

Dear Mr. Gonzalez:

Kimley-Horn and Associates, Inc. ("Kimley-Horn" or "Consultant") is pleased to submit this letter agreement (the "Agreement") to the City of Miami Beach ("Client") for Preparation of Environmental Analysis for Miami Beach Transit Projects. This agreement constitutes Consultant Service Order (CSO) #1 and provides services in accordance with the terms of the Master Agreement for Continuing Professional Services ("Master Agreement"), which is incorporated herein by reference.

Scope of Services

Kimley-Horn will provide the services specifically set forth below.

TASK 1: CORRIDOR ASSESSMENT – PRELIMINARY PROJECT DEFINITION

Consultant will perform a series of work activities in anticipation of environmental analysis and assessment of the proposed corridor. Consultant will analyze, evaluate and document the full loop alternative assessing that the potential alignments are screened and evaluated for environmental analysis. These services may include:

1.1 Review previous studies
1.2 Perform field reviews of potential corridors
1.3 Analyze route terminal, station location, and maintenance/storage facility locations
1.4 Assess transit technologies
1.5 Assess transportation conditions and issues
1.6 Assess environmental conditions
1.7 Assess community and social issues
1.8 Develop preliminary constraints and alignment map
1.9 Develop summary report
1.10 Prepare outline for basis for of Design and State environmental impact report

TASK 2: PRELIMINARY FINANCE AND P3 PROCUREMENT ACTIVITIES

The Consultant will support the City in several early-on P3 Procurement and Finance activities. Services may consist of:

2.1 Notice for solicitation of P3 Procurement Qualifications.
2.2 Initial Screen of Funding Options
2.3 Assess P3 project delivery methods
2.4 Prepare outline for P3 procurement process

TASK 3: START-UP COORDINATION AND STRATEGY MEETINGS

Consultant will participate in project start-up coordination and strategy meetings on behalf of the City in addition to a limited number of Consultant team workshops to develop the overall project management plan strategy. The services may include:

3.1 Project definition meetings with City staff, regulatory agencies and other key stakeholders
3.2 Conduct round/table workshops to develop the PMP roadmap and schedule

Information Provided By Client

We shall be entitled to rely on the completeness and accuracy of all information provided by the Client or the Client's consultants or representatives. The Client shall provide all information requested by Kimley-Horn during the project, including but not limited to the following:

- Any public records requests related to the project

Schedule

We will provide our services as expeditiously as practicable with the goal of meeting our mutually agreeable schedule for expediting the environmental analyses and compliance assessments of the overall program. We expect that this authorization will be completed between 30 and 45 days.

Fee and Expenses

Kimley-Horn will perform the services in Tasks 1, 2 and 3 on an hourly rate basis. Travel expenses will be billed in accordance to the City's current policies. Labor fee will be billed on an hourly basis according to our current rates. Based on current information, Kimley-Horn estimates that labor fees will be approximately $375,000. The fee estimates associated are for general budgeting purposes only and actual fees may be less or more than the estimates.

Task	Fee	Fee Type
Task 1: Corridor Assessment –Prelim. Project Definition	$206,910	Hourly
Task 2: Preliminary Finance and Procurement Activities	$95,900	Hourly
Task 3: Start-up coordination and strategy meetings	$77,300	Hourly
Expenses and Travel	$57,105	Per City Policy
Total	$437,215	

Closure

In addition to the matters set forth herein, our Agreement shall include and be subject to, and only to, the executed Master Agreement for Continuing Professional Services which is incorporated herein by reference. As used in the Master Agreement, "Consultant" shall refer to Kimley-Horn and Associates, Inc., and "Client" shall refer to The City of Miami Beach.

If you concur in all the foregoing and wish to direct us to proceed with the services, please have authorized persons execute both copies of this Agreement in the spaces provided below, retain one copy, and return the other to us. We will commence services only after we have received a fully-executed agreement. Fees and times stated in this Agreement are valid for sixty (60) days after the date of this letter.

We appreciate the opportunity to provide these services to you. Please contact me if you have any questions.

Very truly yours,

KIMLEY-HORN AND ASSOCIATES, INC.

By: Robert A. Lepore, P.E.
Associate

Program Work Plan - Person-Hour Estimate

Project Name: Preparation of Environmental Analysis for Miami Beach Transit Projects Including the Beach Corridor Transit Connection Project and Related Services RFQ 2015-213-KB
Task Name: CSO #1, Project Planning, Definition, and Start-Up Coordination
Date Prepared: 16-Dec-15

Task Number	Task Name		Direct Labor (Person-Hours)														
			Project Manager	Senior Specialist FTA Consulting	Senior Specialist Financial P3 Director	Senior Financial Advisor	Senior Specialist Public Affairs	Senior Vehicle Consultant	Senior Engineer	Senior Project Engineer	Project Engineer	Engineering Intern	Chief Planner	Chief Scientist	Public Affairs Office	Secretary/ Clerical	Total
		Rates	$330	$525	$420	$325	$295	$295	$250	$200	$180	$130	$280	$225	$130	$60	
1	**Corridor Assessment - Preliminary Project Definition**																
1.1	*Review Previous Studies*		10			10			10				10	10		10	60
1.2	*Perform Field Review*		8						8		8	8	8	8			48
1.3	*Analyze Route Termini, Station Locations and Maintenance Storage Facility*		20					10	40		40	40	20				170
1.4	*Evaluate Transit Technologies*		10					40	20		20		20				110
1.5	*Evaluate Transportation Conditions and Issues*		10						10	20	20		10				70
1.6	*Evaluate Environmental Conditions*		10										20	40			70
1.7	*Evalute Community and Social Issues*		10				20						20	20	20		90
1.8	*Develop Preliminary Constraints and Alignment Map*		10						20		20		20			5	75
1.9	*Develop Summary Report*		10						10		20		20			10	70
1.10	*Prepare Outline for Basis of Design and State Environmental Impact Report*		20					10	20		10		20	10		10	100
Task 1 Total		*Hours*	118	0	0	10	20	60	138	20	138	48	168	88	20	35	863
		Fee	$38,940.00	$0.00	$0.00	$3,250.00	$5,900.00	$17,700.00	$34,500.00	$4,000.00	$24,840.00	$6,240.00	$47,040.00	$19,800.00	$2,600.00	$2,100.00	$206,910.00
2	**Preliminary P3 Procurement Activities**																
2.1	*Notice for Solicitation of P3 Procurement Qualifications*		10										20				
2.2	*Initial Screen of Funding Options*		10	10	10	40										5	75
2.3	*Evaluate P3 Project Delivery Methods*		10	10	20	40		10	10				10				110
2.4	*Prepare Outline for P3 Procurement Process*		10	5	10	20		5	5				10			10	75
Task 2 Total		*Hours*	40	25	40	100	0	15	15	0	0	0	40	0	0	15	260
		Fee	$13,200.00	$13,125.00	$16,800.00	$32,500.00	$0.00	$4,425.00	$3,750.00	$0.00	$0.00	$0.00	$11,200.00	$0.00	$0.00	$900.00	$95,900.00
3	**Start-Up Coordination and Strategy Meetings**																
2.1	*Project Definition Meetings with City Staff, Regulatory Agencies, Etc.*		40			20	10	10	20		10		20	10	10	10	160
2.2	*Conduct Roundtable/Workshop to Develop Project Roadmap*		10	10	10	10	10	10	10	10	10		10	10	10	10	130
Task 2 Total		*Hours*	50	10	10	30	20	20	30	10	20	0	30	20	20	20	290
		Fee	$16,500.00	$5,250.00	$4,200.00	$9,750.00	$5,900.00	$5,900.00	$7,500.00	$2,000.00	$3,600.00	$0.00	$8,400.00	$4,500.00	$2,600.00	$1,200.00	$77,300.00

Total Labor	**$380,110.00**
Misc. Expenses (4.5% of Labor)	**$17,105.00**
Out of Town Travel Expenses (Estimated)	**$40,000.00**
TOTAL CONTRACT LIMIT	**$437,215.00**

Attachment 2

Kimley»Horn

February 25, 2016

Jimmy Morales
City Manager
City of Miami Beach
1700 Convention Center Drive
4th Floor
Miami Beach, Florida 33139

Re: Professional Services Agreement, Consultant Service Order (CSO) #2

Dear Mr. Morales:

Kimley-Horn and Associates, Inc. ("Kimley-Horn" or "Consultant") is pleased to submit this CSO #2 to the City of Miami Beach for providing survey, subsurface utility engineering (SUE), and limited geotechnical analysis for Miami Beach Transit Projects, including the Beach Corridor Transit Connection Project and Related Services ("Project"). This CSO provides services in accordance with the terms of the Master Agreement RFQ No. 2015-213-KB for Continuing Professional Services ("Master Agreement") dated December 22, 2015, which is incorporated herein by reference.

Scope of Services

The Consultant will provide the services as set forth below.

Task 1 – Survey, SUE and Geotechnical

The Consultant will perform survey and subsurface utility engineering (SUE) through the public rights-of-way of the limits indicated below, and in the attached map (Attachment 1):

1. 5th Street: Alton Road to Washington Avenue
2. Washington Avenue: 5th Street to Dade Boulevard
3. Alton Road: 5th Street to 17th Street
4. Alton Road: South Pointe Drive to 5th Street
5. South Pointe Drive: Alton Road to Washington Avenue
6. Washington Avenue: South Pointe Drive to 5th Street
7. Meridian Avenue: 17th Street to Dade Boulevard
8. Dade Boulevard: Meridian Avenue to 23rd Street
9. 23rd Street: Dade Boulevard to Collins Avenue
10. Convention Center Drive: 17th Street to Dade Boulevard

The Consultant will also perform limited geotechnical analysis within the limits described above, and along 17th Street from Alton Road to Collins Avenue.

Technical and consulting services under this task may include but not be limited to:

- Consultant will meet with Public Works Director and Staff to review methods, schedule and scope, and sub-consultant surveyor accreditation, and to develop coordination and liaison protocols to ensure the timely and efficient approvals and permits for survey implementation in the Project corridor on City of Miami Beach and Florida Department of Transportation affected roadways.

- Consultant Team will perform topographic survey and SUE services (Level A at locations with soft digs and Level B along the rest of the Project corridors), along the Project corridors as defined in conjunction with the City.

- Consultant Team will perform survey data research for right-of-way maps, parcel maps, plats, plots, and associated data that are pertinent and available for this project, within the limits described above.

- Geotechnical investigations will include a review of available reports and site data, and include acquisition of sample site borings at intervals to be determined with City on the corridor. Findings will be summarized in a geotechnical report.

- Consultant will include data, files, notes, field books, calculations, CADD files, and 3D RT movie files for inclusion in the final deliverable package to the City. Final deliverables will be certified, signed and sealed by a Florida Registered Professional Surveyor.

- Survey and Mapping will be performed consistent with City of Miami Beach requirements specified in the Public Works Engineering Manual for Survey and Mapping Standards (Attachment 2). Survey limits shall extend to 25-feet on either side of the right-of-way except for locations impeded by obstructions or lack of reasonable access (i.e. buildings, walls, locked fences, sites under construction, etc.).

- This task also includes project management and engineering coordination, technical reviews, quality assurance and oversight of the survey, SUE and geotechnical work. The budget is shown in Attachment 3.

Information Provided By Client

We shall be entitled to rely on the completeness and accuracy of all information provided by the Client or the Client's consultants or representatives. The Client shall provide all information requested by the Consultant during the project.

Schedule

The Consultant will provide services as expeditiously as practicable with the goal of meeting a mutually agreeable schedule. A detailed project schedule will be prepared within one week of Notice to Proceed (NTP) outlining a work plan and activities for accomplishing field work and completing deliverables.

Fee and Expenses

The Consultant will perform the services on an hourly rate basis. Travel expenses will be billed in accordance to the City's current policies. Labor fee will be billed on an hourly basis according to our current rates, and unit costs as depicted in attached estimate (i.e. soft digs $350 each). Based on current information, Kimley-Horn estimates that labor fees and expenses will total $1,321,557. The fee estimates associated are for general budgeting purposes only and actual fees may be less or more than the estimates.

Task	Descriptions	Fee	Fee Type
Task 1	Survey, SUE & Geotech.	$1,321,549	Hourly Not to Exceed/Unit Costs

Payment will be due within 30 days of your receipt of the invoice.

Closure

In addition to the matters set forth herein, our Agreement shall include and be subject to, and only to, the executed Master Agreement for Continuing Professional Services dated December 22, 2015, which is incorporated herein by reference. As used in the Master Agreement RFQ No. 2015-213-KB, "Consultant" shall refer to Kimley-Horn and Associates, Inc., and "Client" shall refer to The City of Miami Beach.

We appreciate the opportunity to provide these services to you. Please contact me if you have any questions.
Very truly yours,

KIMLEY-HORN AND ASSOCIATES, INC.

By: Gregory S Kyle, AICP
Senior Vice President

O:\gkyle\Miami Beach Rail\Contract\Work Order 2\Miami Beach CSO 2 Revised 2016 02 25.docx

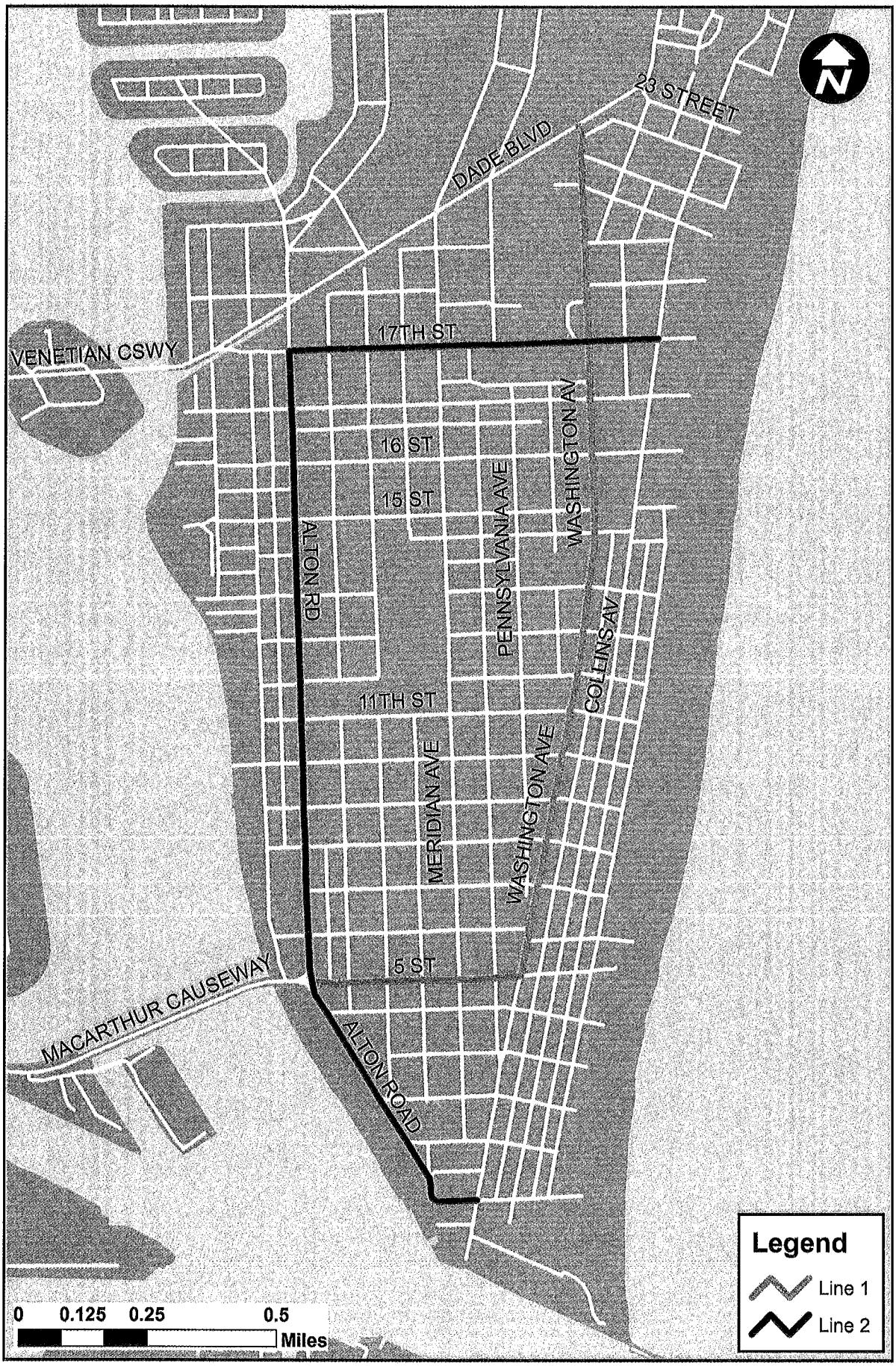
Approved:

CONSULTANT		**CITY OF MIAMI BEACH**	
Robert A. Lepore	2/25/16		
Project Manager	Date	City Manager	Date

Attachment 1

Attachment 1

Light Rail/Modern Streetcar Project in Miami Beach



Kimley»Horn

02/05/2016

Attachment 2

PART I - SECTION 1 - STANDARD DESIGN AND PLAN PRODUCTION CRITERIA

A. Survey & Mapping Standards and Submittal Requirements

All Surveys shall be performed by a Professional Surveyor and Mapper licensed in the State of Florida pursuant to Chapter 5J-17 and shall meet the Standards of Practice for Professional Surveying and Mapping as identified in Rule 5J-17.050 through 5J-17.052 of the Florida Administrative Code and the additional requirements as follows.

A.1 General Requirements: As a minimum for Topographic, Construction Layout Surveys will address the following:

1) Calculate a centerline Baseline with 100-foot stations along the baseline with horizontal control monumentation as required by the Rule 5J-17.052(3). The baseline of the survey shall be tied to right-of-way and monuments. Each surveyor will be responsible for obtaining right-of-way information from the most recent records.

2) The Surveyor will set Benchmarks at convenient locations along the corridor to be used during the design, construction and completion of the project. Permanent Benchmarks shall have a maximum of 1,100 feet between existent or established Benchmarks along the alignment. The Surveyor shall tie-in at least two existing Government published Benchmarks to the vertical circuit and take cross sections at 50 foot intervals along the entire project corridor. Site benchmarks and elevations shall be derived from existing government Benchmarks and carried into the proposed site using Second Order, Class II procedures. A full listing of Benchmark locations shall accompany the survey data.

3) Cross section elevations shall define all grade breaks such as intersections, swale, edge of pavement, pavement centerline, curb and gutter, edges of sidewalk, driveway connections, right-of-way line, edge of the 25-foot right-of-way offset, Encroachments (both natural and built-in), etc.

4) The Surveyor shall obtain elevations of the lowest finished floor of all buildings adjacent to project corridor.

5) The Surveyor shall locate and identify all visible surface improvements and Topographic features that exist along the width of the corridor, such as the following:

   a. Existing valve boxes, water / electrical meter boxes, electrical pull boxes, telephone / cable risers, fences, hydrants, etc.

   b. Above ground and underground utilities, invert elevations of accessible underground utilities, wood / concrete utility poles, culverts, guardrails, pavement limits, headwalls, end-walls, manholes, vaults, mailboxes, driveways, side streets, trees, landscaping, traffic signage and any other noted improvements. Note that Survey will identify fence material / height, landscaping plant material limits and driveway construction materials; as well as private property Encroachments (i.e. landscaping, overhangs, improvements, etc.)

6) The surveyor shall coordinate with each utility agency and/or by other means to identify the location of all existing underground utilities and the interconnectivity of the underground utilities.

7) Survey limits shall include the entire right-of-way and an additional 25-feet on either side of the right-of-way.

8) Survey data will indicate geometry of perimeter private property plats (inclusive of fences, landscaping and driveways).

9) All Horizontal control and locations shall be tied to the Florida State Plane Coordinate System, East Zone (NAD 83/90).

10) All Vertical control and elevations shall be referenced to North American Vertical Datum of 1988 (NAVD1988).

11) The Surveyor shall be responsible for the location of existing and/or establishing Vertical and Horizontal Survey Control Points.

12) Digital submittal of Surveys shall be prepared in compliance with the City of Miami Beach, Public Works Manual **SECTION F. Electronic Media Standards and Requirements** relative to previous described Horizontal and Vertical Datum.

13) Hard Copy (paper) submittal of (2) 22"x34" and (2) 11"x17" Hard Copy (paper) with original Signature and Seal, and PDF copy of signed originals.

A.1(a) As-Built/Record Survey Requirements: As-Built/Record Survey will be required upon completion of all construction projects that lay within City-owned properties. Including, but not limited to, City Right of Ways, Easements, Parcels, and Submerged Lands, etc. All improvements including, but not limited to, landscaping will be required. For convenience purposes the following is a copy of the State of Florida requirements for As-Built/Record Surveys. The consultant is responsible to assure the latest revision is used. At a minimum the additional requirements shall address the following.

5J-17 Florida Standards of Practice for Professional Surveying and Mapping

1) 5J-17.052 (1) As-Built/Record Survey:
(a) When performing as-built or record surveys, the surveyor and mapper shall obtain field measurements of vertical or horizontal dimensions of constructed improvements so that the constructed facility can be delineated in such a way that the location of the construction may be compared with the construction plans.
(b) When the surveyor and mapper prepare as-built maps they will clearly show by symbols, notations, or delineations, those constructed improvements located by the survey.
(c) All maps prepared shall meet applicable minimum technical standards.
(d) The vertical and horizontal accuracy of the measurements made shall be such that it may be determined whether the improvements were constructed consistent with planned locations.

In addition to the Florida Standards of Practice, the following additional requirements for As-Built/Record Surveys shall also be met.

2) The Surveyor shall be responsible for the location, establishing or replacement of Vertical and Horizontal Survey Control Points.

3) Hard Copy (paper) submittal (2) 22"X34 and (2) 11"x17" submittal with original Signature and Seal, PDF copy of signed originals relative to the North American Vertical Datum of 1988 (NAVD 1988) and referenced to Florida State Plane Coordinates, Florida East Zone, (NAD 83/90).

4) Digital submittal of As-Built/Record Surveys shall be prepared in compliance with the City of Miami Beach, Public Works Manual **SECTION F. Electronic Media Standards and Requirements** relative to previously described Horizontal and Vertical Datum.

Attachment 3

Master Summary

Program Work Plan - Person-Hour Estimate

CSO: #2
Project Name: Miami Beach LRT/Modern Streetcar
Task Name: Survey/Utility Exploration and Mapping, Geotechnical Investigation
Date Prepared: 10-Feb-16

Task Number	Task Name	Direct Labor (Person-Hours)												
		Project Manager	Chief Utility Engineer	Senior Project Engineer	Project Engineer	Senior PSM Surveyor	Engineer	Support Analyst I	Support Analyst II	3D RT Scanning Crew	3-Man Surveying Crew	Utility Locating Crew	Secretary / Clerical	Total
	Rates	$330	$225	$200	$180	$165	$150	$100	$85	$400	$180	$155	$60	
Task 1 Survey and Geotech														
1.1 Survey / SUE		12	193	10	60	439	541	1218	822	541	1332	713	193	6073
		$3,960	$43,425	$2,000	$10,800	$72,435	$81,120	$121,780	$69,870	$216,320	$239,760	$110,484	$11,580	$983,534
1.2 Geotechincal Oversight		4	0	5	15	0	0	20	0	0	0	0	0	44
		$1,320	$0	$1,000	$2,700	$0	$0	$2,000	$0	$0	$0	$0	$0	$2,320
All Tasks	*Total Hours*	16	193	15	75	439	541	1238	822	541	1332	713	193	6117
	Total Fee	$5,280	$43,425	$3,000	$13,500	$72,435	$81,120	$123,780	$69,870	$216,320	$239,760	$110,484	$11,580	$990,554

Total Labor	**$990,554**
Misc. Expenses (4.5% of Labor)	**$44,575**
Maintenance of Traffic ($1,200/day X 60 days)	**$72,000**
Off-Duty Police Officers ($63/hr X 12 hrs X 60 days X 2 officers)	**$61,920**
Potholes / Soft Digs (175 x $350)	**$52,500**
Estimate for Geotechnical Testing (approximately 40 borings)	**$100,000**
TOTAL CONTRACT LIMIT	**$1,321,549**

Craig A Smith
Program Work Plan - Person-Hour Estimate

CSO: #2
Project Name: Miami Beach LRT/Modern Streetcar
Task Name: Survey/Utility Exploration and Mapping, Geotechnical Investigation
Date Prepared: 10-Feb-16

Task Number	Task Name	Direct Labor (Person-Hours)									
		Chief Utility Engineer	Senior PSM Surveyor	Engineer	Support Analyst I	Support Analyst II	3D RT Scanning Crew	3-Man Surveying Crew	Utility Locating Crew	Secretary/ Clerical	Total
	Rates	$225	$165	$150	$100	$85	$400	$180	$155	$60	
Task 1 Survey and SUE											
1.1 5th Street: Alton Rd to Washington Ave											
Survey							4 days	5.5 days/2 crews	4 days/2 crews		
Map of Specific Purpose Survey - Control & Route		0	18	0	23	0	0	60		0	101
Map of Specific Purpose Survey - Drainage & Utilities		0	10	0	27	0	0	48	0	0	85
Sub-Surface Utility Engineering											
Records Research		4	0	0	0	21	0			0	25
Utility Documentation (Photos & Sketches)		0	0	0	0	8	0			16	24
2 Dimensional Utility Locating		0	0	0	0	0	0		64	0	64
2D CADD Plans						32					32
3 Dimensional Utility Locating		0	0	0	0	0	48			0	48
3D Radar Tomography Processing		0	0	48	0	0	0			0	48
3D CADD Plans		0	0	0	32	0	0			0	32
QA/QC Plans		12	4	2	2	0	2		2	0	24
		16	32	50	84	61	50	108	66	16	483
		$3,600	$5,280	$7,500	$8,400	$5,185	$20,000	$19,440	$10,230	$960	$80,595
1.2 Washington Ave: 5th St to Dade Blvd											
Survey							11 days	21.5 days/2 crews	11 days/2 crews		
Map of Specific Purpose Survey - Control & Route		0	70	0	93	0	0	240		0	403
Map of Specific Purpose Survey - Drainage & Utilities		0	40	0	108	0	0	190	0	0	338
Sub-Surface Utility Engineering											
Records Research		16	0	0	0	84	0			0	100
Utility Documentation (Photos & Sketches)		0	0	0	0	28	0			64	92
2 Dimensional Utility Locating		0	0	0	0	0	0		176	0	176
2D CADD Plans						128					128
3 Dimensional Utility Locating		0	0	0	0	0	132			0	132
3D Radar Tomography Processing		0	0	132	0	0	0			0	132
3D CADD Plans		0	0	0	128	0	0			0	128
QA/QC Plans		45	25	6	6	0	6		6	0	94
		61	135	138	335	240	138	430	182	64	1723
		$13,725	$22,275	$20,700	$33,500	$20,400	$55,200	$77,400	$28,210	$3,840	$275,250
1.3 Alton Rd: 5th St to 17th St											
Survey							10 days	13.5 days/2 crews	10 days/2 crews		
Map of Specific Purpose Survey - Control & Route		0	52	0	68	0	0	150		0	270
Map of Specific Purpose Survey - Drainage & Utilities		0	30	0	80	0	0	118	0	0	228
Sub-Surface Utility Engineering											
Records Research		10	0	0	0	62	0			0	72
Utility Documentation (Photos & Sketches)		0	0	0	0	20	0			40	60
2 Dimensional Utility Locating		0	0	0	0	0	0		160	0	160
2D CADD Plans						100					100
3 Dimensional Utility Locating		0	0	0	0	0	120			0	120
3D Radar Tomography Processing		0	0	120	0	0	0			0	120
3D CADD Plans		0	0	0	100	0	0			0	100
QA/QC Plans		35	15	5	5	0	5		5	0	70
		45	97	125	253	182	125	268	165	40	1300
		$10,125	$16,005	$18,750	$25,300	$15,470	$50,000	$48,240	$25,575	$2,400	$211,865
1.4 Alton Rd: South Pointe Drive to 5th Street											
Survey							4 days	5.5 days/2 crews	4 days/2 crews		
Map of Specific Purpose Survey - Control & Route		0	21	0	27	0	0	60		0	108
Map of Specific Purpose Survey - Drainage & Utilities		0	12	0	32	0	0	47	0	0	91
Sub-Surface Utility Engineering											
Records Research		4	0	0	0	25	0			0	29
Utility Documentation (Photos & Sketches)		0	0	0	0	10	0			16	26
2 Dimensional Utility Locating		0	0	0	0	0	0		64	0	64
2D CADD Plans						40					40
3 Dimensional Utility Locating		0	0	0	0	0	48			0	48
3D Radar Tomography Processing		0	0	48	0	0	0			0	48
3D CADD Plans		0	0	0	40	0	0			0	40
QA/QC Plans		14	5	2	2	0	2		2	0	27
		18	38	50	101	75	50	107	66	16	521
		$4,050	$6,270	$7,500	$10,100	$6,375	$20,000	$19,260	$10,230	$960	$84,745
1.5 South Pointe Dr: Alton Rd to Washington Ave											
Survey							1 day	1 day/2 crews	1 day/2 crews		
Map of Specific Purpose Survey - Control & Route		0	4	0	5	0	0	12		0	21
Map of Specific Purpose Survey - Drainage & Utilities		0	2	0	6	0	0	10	0	0	18
Sub-Surface Utility Engineering											
Records Research		1	0	0	0	5	0			0	6
Utility Documentation (Photos & Sketches)		0	0	0	0	2	0			4	6
2 Dimensional Utility Locating		0	0	0	0	0	0		16	0	16
2D CADD Plans						7					7
3 Dimensional Utility Locating		0	0	0	0	0	12			0	12
3D Radar Tomography Processing		0	0	12	0	0	0			0	12
3D CADD Plans		0	0	0	7	0	0			0	7
QA/QC Plans		2	1	1	1	0	1		1	0	7
		3	7	13	19	14	13	22	17	4	112
		$675	$1,155	$1,950	$1,900	$1,190	$5,200	$3,960	$2,635	$240	$18,905
1.6 Washington Ave: South Pointe Dr to 5th St											
Survey							4 days	5.5 days/2 crews	4 days/2 crews	0	
Map of Specific Purpose Survey - Control & Route		0	19	0	25	0	0	60		0	104
Map of Specific Purpose Survey - Drainage & Utilities		0	11	0	29	0	0	48	0	0	88
Sub-Surface Utility Engineering											
Records Research		4	0	0	0	24	0			0	28
Utility Documentation (Photos & Sketches)		0	0	0	0	8	0			16	24
2 Dimensional Utility Locating		0	0	0	0	0	0		64	0	64
2D CADD Plans						40					40
3 Dimensional Utility Locating		0	0	0	0	0	48			0	48
3D Radar Tomography Processing		0	0	48	0	0	0			0	48
3D CADD Plans		0	0	0	40	0	0			0	40
QA/QC Plans		12	6	2	2	0	2		2	0	26
		16	36	50	96	72	50	108	66	16	510
		$3,600	$5,940	$7,500	$9,600	$6,120	$20,000	$19,440	$10,230	$960	$83,390

Craig A Smith
Program Work Plan - Person-Hour Estimate

CSO: #2
Project Name: Miami Beach LRT/Modern Streetcar
Task Name: Survey/Utility Exploration and Mapping, Geotechnical Investigation
Date Prepared: 10-Feb-16

Task Number	Task Name	Direct Labor (Person-Hours)									
		Chief Utility Engineer	Senior PSM Surveyor	Engineer	Support Analyst I	Support Analyst II	3D RT Scanning Crew	3-Man Surveying Crew	Utility Locating Crew	Secretary/ Clerical	Total
	Rates	$225	$165	$150	$100	$85	$400	$180	$155	$60	
1.7 Meridian Ave.: 17th St to Dade Blvd											
Survey							2 days	3 days/2 crews	2 days/2 crews	0	
Map of Specific Purpose Survey - Control & Route		0	11	0	14	0	0	34		0	59
Map of Specific Purpose Survey - Drainage & Utilities		0	6	0	16	0	0	27	0	0	49
Sub-Surface Utility Engineering											
Records Research		2	0	0	0	13	0			0	15
Utility Documentation (Photos & Sketches)		0	0	0	0	5	0			8	13
2 Dimensional Utility Locating		0	0	0	0	0	0		32	0	32
2D CADD Plans						21					21
3 Dimensional Utility Locating		0	0	0	0	0	24			0	24
3D Radar Tomography Processing		0	0	24	0	0	0			0	24
3D CADD Plans		0	0	0	21	0	0			0	21
QA/QC Plans		6	2	2	2	0	2		2	0	15
		8	19	26	53	39	26	61	34	8	273
		$1,800	$3,135	$3,870	$5,280	$3,315	$10,320	$10,980	$5,239	$480	$44,419
1.8 Dade Blvd: Meridian Ave to 23rd St											
Survey							4 days	6 days/2 crews	4 days/2 crews		
Map of Specific Purpose Survey - Control & Route		0	21	0	27	0	0	65		0	113
Map of Specific Purpose Survey - Drainage & Utilities		0	12	0	32	0	0	52	0	0	96
Sub-Surface Utility Engineering											
Records Research		2	0	0	0	24	0			0	26
Utility Documentation (Photos & Sketches)		0	0	0	0	8	0			16	24
2 Dimensional Utility Locating		0	0	0	0	0	0		64	0	64
2D CADD Plans						40					40
3 Dimensional Utility Locating		0	0	0	0	0	48			0	48
3D Radar Tomography Processing		0	0	48	0	0	0			0	48
3D CADD Plans		0	0	0	40	0	0			0	40
QA/QC Plans		12	6	2	2	0	2		2	0	26
		14	39	50	101	72	50	117	66	16	525
		$3,150	$6,435	$7,500	$10,100	$6,120	$20,000	$21,060	$10,230	$960	$85,555
1.9 23rd St: Dade Blvd to Collins Ave											
Survey							1 day	2 days/2 crews	1 day/2 crews		
Map of Specific Purpose Survey - Control & Route		0	7	0	9	0	0	24		0	40
Map of Specific Purpose Survey - Drainage & Utilities		0	4	0	11	0	0	19	0	0	34
Sub-Surface Utility Engineering											
Records Research		1	0	0	0	8	0			0	9
Utility Documentation (Photos & Sketches)		0	0	0	0	3	0			5	8
2 Dimensional Utility Locating		0	0	0	0	0	0		16	0	16
2D CADD Plans						15					15
3 Dimensional Utility Locating		0	0	0	0	0	12			0	12
3D Radar Tomography Processing		0	0	12	0	0	0			0	12
3D CADD Plans		0	0	0	15	0	0			0	15
QA/QC Plans		4	1	1	1	0	1		1	0	9
		5	12	13	36	26	13	43	17	5	170
		$1,125	$1,980	$1,950	$3,600	$2,210	$5,200	$7,740	$2,635	$300	$26,740
1.10 Conventionn Center Dr: 17th St to Dade Blvd.											
Survey							2 days	3 days/2 crews	2 days/2 crews		
Map of Specific Purpose Survey - Control & Route		0	13	0	17	0	0	38		0	68
Map of Specific Purpose Survey - Drainage & Utilities		0	8	0	20	0	0	30	0	0	58
Sub-Surface Utility Engineering											
Records Research		1	0	0	0	15	0			0	16
Utility Documentation (Photos & Sketches)		0	0	0	0	5	0			8	13
2 Dimensional Utility Locating		0	0	0	0	0	0		32	0	32
2D CADD Plans						21					21
3 Dimensional Utility Locating		0	0	0	0	0	24			0	24
3D Radar Tomography Processing		0	0	24	0	0	0			0	24
3D CADD Plans		0	0	0	21	0	0			0	21
QA/QC Plans		6	3	2	2	0	2		2	0	17
		7	24	26	60	41	26	68	34	8	294
		$1,575	$3,960	$3,900	$6,000	$3,485	$10,400	$12,240	$5,270	$480	$47,310
Task 1 Total	***Hours***	**193**	**439**	**541**	**1138**	**822**	**541**	**1332**	**713**	**193**	**5911**
	Fee	**$43,425**	**$72,435**	**$81,120**	**$113,780**	**$69,870**	**$216,320**	**$239,760**	**$110,484**	**$11,580**	**$958,774**

Total Labor	$958,774
Misc. Expenses (4.5% of Labor)	$43,145
Maintenance of Traffic ($1,200/day X 60 days)	$72,000
Off-Duty Police Officers	$61,920
Potholes / Soft Digs (150 x $350)	$52,500
Estimate for Geotechnical Testing (approximately 40 borings)	$100,000
TOTAL CONTRACT LIMIT	$1,288,339

Kimley-Horn

Program Work Plan - Person-Hour Estimate

CSO: #2
Project Name: Miami Beach LRT/Modern Streetcar
Task Name: Survey/Utility Exploration and Mapping, Geotechnical Investigation
Date Prepared: 5-Feb-16

Task Number	Task Name		Direct Labor (Person-Hours)				
			Project Manager	Senior Project Engineer	Project Engineer	Support Analyst I	Total
		Rates	$330	$200	$180	$100	
Task 1 Survey and Geotech							
1.1 Survey / SUE Project Management			12	10	60	80	162
			$3,960	$2,000	$10,800	$8,000	$24,760
1.2 Geotech Project Management			4	5	15	20	44
			$1,320	$1,000	$2,700	$2,000	$7,020
Task 1 Total		*Hours*	16	15	75	100	206
		Fee	$5,280	$3,000	$13,500	$10,000	$31,780

Total Labor	**$31,780.00**
Misc. Expenses (4.5% of Labor)	**$1,430.10**
TOTAL CONTRACT LIMIT	**$33,210.10**

Attachment 3

Kimley»Horn

February 25, 2016

Jimmy Morales
City Manager
City of Miami Beach
1700 Convention Center Drive
4th Floor
Miami Beach, Florida 33139

Re: Professional Services Agreement, Consultant Service Order (CSO) #3

Dear Mr. Morales:

Kimley-Horn and Associates, Inc. ("Kimley-Horn" or "Consultant") is pleased to submit this CSO #3 to the City of Miami Beach for providing the Preparation of Environmental Analysis for Miami Beach Transit Projects, including the Beach Corridor Transit Connection Project and Related Services ("Project"). This CSO provides services in accordance with the terms of the Master Agreement RFQ No. 2015-213-KB for Continuing Professional Services ("Master Agreement") dated December 22, 2015, which is incorporated herein by reference.

Scope of Services

The Consultant will provide the services as set forth below.

Task 1 - Project Development and Engineering

The Consultant will perform a series of activities and services including preliminary engineering in order to support and achieve the necessary environmental approvals for the Project.

The Project must undergo an environmental study and review in order to meet the required standards to receive the necessary approvals. Whether the State of Florida Environmental Impact Report (SEIR) or the Federal National Environmental Policy Act (NEPA) guidelines are applied, the requirements to assess and measure the project's environmental, social, physical, and capital and operating cost impacts are similar. The environment studies are required to begin with Project Development which includes items such as the project's alignment, station locations, termini, operations, right-of-way requirements, and underground and aboveground utility locations and conditions.

Preliminary engineering is the term often used to reflect the amount of engineering necessary to define the key engineering elements of a project. The Consultant will perform preliminary engineering to the extent necessary to meet standards and approvals. For Federal and State environmental studies, the expectation is that the preliminary engineering phase will define the project to the point where it has well-defined alignment, stations, terminals, underground and aboveground utility survey, needs for right-of-way acquisition, vehicle and system configurations, and operating profiles. This level of detail is described as "the engineering necessary to complete NEPA and receive State or Federal approval," or more generally 15% design plans, although up to 30% design plans may be advanced for specific complex items being studied. This level of detail is required to provide better calculations of costs, benefits, impacts, and reduced financial risks. A better defined project typically leads to a "better price" by reducing unknown risks associated with the project, and enhancing opportunities for innovation in finance and in design.

Technical and consulting activities and services under this task may include but not be limited to:

1.1 TRACK

- Conceptual Alignment
- Plan and Profile for the Entire Alignment
- Trackway Typical Sections
- Identification of Special Trackwork
- Order of Magnitude Costs

1.2 CIVIL, BRIDGE AND STRUCTURES

- Roadway Typical Sections
- Station Platforms
- Conceptual Drainage/Stormwater (Resiliency)
- Conceptual Streetscape
- Street Lighting Analysis
- Conceptual Station Design
- Identification of Existing and/or Future Utility Lines and Potential Conflicts
- Soil Borings along the Alignment and at the Vehicle Maintenance Facility (VMF)
- Identification of Bridges and Structures, including any Potential Concerns/Conflicts
- Identification of Potential Locations for Traction Power Substations (TPSS)
- Order of Magnitude Costs

1.3 SYSTEMS

- Traction Electrification System
- Train Signaling/Train Control System
- Communication Systems
- Systems Integration
- Corrosion Control
- Order of Magnitude Costs

1.4 TRAFFIC

- Traffic Impact Analysis/Modeling
- Evaluation of Removal/Repurposing of Travel Lanes
- Traffic Signal Modifications
- Transit Signal Priority (TSP)/Pre-Emption
- Concept of Operations

1.5 RIDERSHIP

- Ridership Estimation and Corridor Applications
- Peak and Directional Ridership by Travel Market
- Forecasts for Various Operating/Service Plans

1.6 OPERATIONS

- Operating Plan
- Service Plan
- Operations and Maintenance Costs

1.7 VEHICLES

- Survey of Available Vehicle with Wireless Technology
- Conceptual Vehicle Requirements
- Conceptual Vehicle Performance

1.8 VEHICLE MAINTENANCE FACILITY

- Facility Program Requirements
- VMF Site Plan

1.9 ALTERNATIVES ANALYSIS / PLANNING

- Route Termini Analysis
- VMF Site Selection
- Locations Station Stops
- Documentation of Right-of-Way Needs

DELIVERABLES (SAMPLE LIST):

- Conceptual Alignment Plans Supporting Environmental Reports
- Plan, Profiles, and Typical Sections Plans
- Route / Alignment Report
- VSMF Site Location Report
- Station Stops Report / Plans
- Right-Of-Way Needs Report
- Roadway Typical Section Package
- Drainage Plans (Plan View, including Outfall Locations)
- Plan and Elevation, as well as Typical Sections, for Existing or Proposed Bridges
- Traction Power Substations Report and Plans
- Utility Matrix and Potential Conflicts and Adjustments
- Street Lighting Report / Plans
- Station Design Criteria Requirements
- Prototypical Station Layout
- Performance Criteria for Traction Power System
- Performance Criteria for Communication Systems
- Signal Priority/Pre-Emption Impacts Report
- Conceptual Traffic Signal Plans
- Signalization Analysis Report Related to Impacts to Existing and Future Vehicular Traffic
- Forecast / Modeling Ridership Report
- Performance Criteria and Basis of Selection of Vehicle
- Performance Criteria for Minimum Requirements / Past Experience of Vehicle Supplier
- Operating Plan Report
- Conceptual VMF Plans
- VMF Site Plan

Task 2 - Environmental Compliance / Documentation

The Consultant will work with the City of Miami Beach to determine the appropriate environmental review document. If the City desires to pursue federal funding or provide flexibility for access to federal funds or financing, federal National Environmental Policy Act (NEPA) review is required. If no federal funds are used for the project, only a State Environmental Impact Report (SEIR) is required. The environmental support documentation is similar regardless of whether it is a federal or state document.

The appropriate class of action will be determined through coordination with the Federal Transit Administration (FTA) and Florida Department of Transportation (FDOT). The project's vehicle maintenance facility (VMF) along with the traction power substations may require acquisition of additional right-of-way, which will likely result in the determination that an environmental assessment (EA) is the appropriate class of action.

The Consultant will perform environmental analyses, compliance assessments, and permitting services necessary to achieve environmental compliance, approvals and to identify necessary permits applicable during project design, engineering, and construction. The Project Development and Engineering Task (Task 1) will provide the definition of the project needed to assess the socio-economic, natural, physical, and social effects of the project. The technical and consulting services under this task may include but not be limited to:

2.1 CULTURAL RESOURCES, INCLUDING CULTURAL RESOURCES ASSESSMENT SURVEY (CRAS) AND SECTION 106 DETERMINATION OF EFFECTS, IF APPLICABLE.

A CRAS will be prepared which will include archaeological desktop analysis as well as the historic resources survey results. Florida Master Site File forms, Survey Log sheets, and other necessary documents will be included within the CRAS.

A Section 106 Determination of Effects Report includes an analysis of effects to all National Register-eligible or National Register-listed resources identified during the CRAS. The focus of the report is the discussion of any effects that the project improvements will have on the resources. During the assessment of effects, the Criteria of Adverse Effect established by the Section 106 regulations will be applied to the historic resources, and both primary and secondary impacts to the resource will be evaluated. This report serves as the preliminary documentation for determining potential effects and mitigation measures. Components of the report includes a description of the project improvements and its benefits, historical context,

description of National Register-listed properties, discussion of potential effects to the historic properties, and a description of measures proposed to mitigate adverse effects.

2.2 NOISE / VIBRATION ANALYSIS AND DOCUMENTATION

The Consultant will analyze the noise and vibration impacts of the proposed project using guidance from the FTA. The Consultant will identify noise sensitive receivers, monitor existing noise levels and estimate future project related noise impacts. The uses along the alignment will be inventoried to determine if there are any vibration-sensitive facilities, such as medical facilities with vibration-sensitive equipment or recording studios, to determine if vibration control measures may be necessary for the project.

2.3 AIR / QUALITY ANALYSIS

The Consultant shall gather data and perform the air quality screening analysis, including documenting the attainment status of the region and the effect of the project on regional emissions.

2.4 NATURAL RESOURCES/SOCIAL RESOURCES AND EFFECTS EVALUATION/ MANMADE ENVIRONMENT/ CONTAMINATION (HAZARDOUS MATERIALS)

The following issue areas will be evaluated for impacts from the Project:

- Land Use
- Acquisitions and Displacements/Relocation Potential
- Neighborhoods/Social
- Economic
- Environmental Justice
- Community Facilities
- Aesthetics
- Public Parklands
- Safety and Security
- Traffic/Parking and Accessibility/Mobility
- Wetlands and Ecologically Sensitive Areas
- Essential Fish Habitat
- Floodplains and Drainage
- Water Quality
- Special Designations/Outstanding Florida Waters/Aquatic Preserve

- Endangered Species/Wildlife and Habitat
- Hazardous Materials/Contamination
- Construction Impact Analysis
- Section 4(f) Evaluation (if required)

Documentation will be prepared for each of the impact areas summarizing the assessment methodology and findings.

2.5 ENVIRONMENTAL DOCUMENTATION, DRAFT AND FINAL PREPARATION (SEIR, EA/FONSI AS APPLICABLE)

A preliminary internal Draft EA/SEIR will be prepared and circulated for review and comments. A second Draft EA/SEIR will be prepared and circulated for internal review and comments by the FTA and FDOT prior to finalizing the Draft EA/SEIR for public distribution. The Consultant will prepare an EA/SEIR distribution list, prepare appropriate notice of EA/SEIR availability announcements and be responsible for the document production.

A public hearing will be held during the EA/SEIR review and comment period, as will be outlined in the Public Involvement Plan. Upon closure of the Draft EA/SEIR review and comment period, the Consultant will work with FTA and FDOT (or other designated lead federal agency) in preparing the request for Finding of No Significant Impact (FONSI) documentation. Included in the FONSI will be responses to substantive comments, changes to the alternatives/impacts as a result of the EA/SEIR review, definition of the preferred alternative and final mitigation measures.

TASK 2 PRIMARY DELIVERABLES

- Cultural Resources Assessment Survey
- Section 106 Determination of Effects
- Noise and Vibration Analysis
- Air Quality Technical Memorandum
- Environmental Support Documents
    - Social/Cultural Effects Report
    - Contamination Screening Evaluation Report
    - Endangered Species Biological Assessment Report
    - Essential Fish Habitat Assessment Memorandum
    - Wetlands Evaluation Report
- State Environmental Impact Report (SEIR)
- National Environmental Policy Act (NEPA) Documentation

- Annotated EA Outline
- Draft EA
- Final EA
- FONSI

Task 3 – Public Outreach

A strategic, proactive and coordinated public and community relations program is critical to building understanding and support among key audiences, including area residents, the business community, media, public officials and others. A comprehensive public and stakeholder involvement plan will be developed in conjunction with the City and primary stakeholders to establish a decision making framework that considers the perspectives of the community.

3.1 PUBLIC INVOLVEMENT PLAN

A Public Involvement Plan (PIP) will be prepared detailing the approach which will be implemented in order to conduct public outreach on the project. The PIP will identify key interest groups within the study area and detail forms of media contact and methodologies for securing community and agency participation in the project development. The PIP will outline the specific public outreach requirements to comply with both federal and state environmental review processes.

An outline of additional tasks anticipated to be included in the agency/ stakeholder involvement process is presented below.

- Identify Stakeholders
- Define Engagement Techniques
- Identify Key Messages
- Link Engagement Activities to Project Schedule
- Review Agency Coordination
- FTA Coordination

Based on the scope defined in the PIP, a separate CSO will be developed for the public outreach activities required for the environmental and Public-Private Partnership (P3) proposal and procurement activities.

TASK 3 PRIMARY DELIVERABLES:

- Public Involvement Plan

Task 4 - Project Funding Plan

The Consultant in partnership with the City of Miami Beach will develop a funding plan that addresses the capital cost and operating/maintenance costs associated with the Project. Technical and consulting steps may include but not be limited to:

4.1 SCREEN OF LOCAL, STATE AND FEDERAL FUNDING OPTIONS (CAPITAL AND OPERATING)

The Consultant will identify and screen the funding options in collaboration with the City of Miami Beach (City). The Consultant will develop an initial list of funding options, provide a summary matrix with pros and cons to facilitate discussion and decision-making by the City in narrowing funding and financing options. One of the key issues for consideration will include funding partnerships among different levels of government. Several steps involved in the screening of the funding and financing options will include:

- In partnership with the City develop guidelines for possible funding sources
- High level screen of available funding options
- Hold a workshop with the City and partners (as defined by the City) to discuss funding options and to narrow the list of feasible funding options based on the guidelines (to be defined in the Public Involvement Plan and included in a subsequent CSO for Public Outreach).

4.2 FORECAST OF FUNDING OPTIONS

The City and the Consultant will determine responsibilities for developing forecasts for the locally and non-locally funded options which may include:

- City Local Share Revenues
    - Forecast of a possible property special assessment for properties adjacent to and within a close proximity to the Project.
    - Forecast of ridership revenues assuming this is a system for which the City wishes to charge a fare for the service. This will be coordinated with the ridership forecast in Task 1.

    - Forecast of other potential City revenues such as parking fees that might be associated with the Project service that can be dedicated to funding the local share.
    - Perform additional analysis on key funding options as needed to provide solid estimates of the funding options to assist in further decision-making.
- Miami-Dade County (County) and Citizens' Independent Transportation Trust (CITT) Revenues
    - Evaluate and assist the City in discussions with partner local governments such as the County and the CITT for possible funding for the Project.
- State of Florida Revenues
    - Evaluate and assist the City in discussions with the State of Florida including the Department of Transportation (FDOT) for possible revenues such as state rail and transit capital grants for the LRT/Modern Streetcar project.
- Federal Revenues
    - Should the City wish to retain federal financial eligibility, the Consultant will assist the City in discussions with the United States Department of Transportation (USDOT) and other federal agencies/officials for federal assistance in Project.

4.3 DEVELOPMENT OF FUNDING PLAN

The City and the Consultant will:

- Identify and execute further steps to move the narrowed list of funding options forward and the anticipated timing to do so.
- Hold a Workshop to finalize and move the agreed on funding options forward (to be defined in the Public Involvement Plan and included in a subsequent CSO for Public Outreach).

4.4 ADVANCE THE FUNDING PLAN AND DEVELOP NECESSARY FUNDING COMMITMENTS

Consultant activities will include participation in:

- Stakeholder meetings on local funding options (to be defined in the Public Involvement Plan and included in a subsequent CSO for Public Outreach)
- Local approval processes for local funding options
- Grant applications for state or federal (TIGER) discretionary grants (as needed)

TASK 4 DELIVERABLES:

- Funding Options Screening Analysis
- Forecasts of Property, Ridership, Parking Revenues
- Project Funding Plan
- Grant Applications (as needed)

Information Provided By Client

We shall be entitled to rely on the completeness and accuracy of all information provided by the Client or the Client's consultants or representatives. The Client shall provide all information requested by the Consultant during the project.

Schedule

The Consultant will provide services as expeditiously as practicable with the goal of meeting a mutually agreeable schedule.

Fee and Expenses

The Consultant will perform the services in Tasks 1 - 4 on an hourly rate basis. Travel expenses will be billed in accordance to the City's current policies. Labor fee will be billed on an hourly basis according to our current rates. Based on current information, Kimley-Horn estimates that labor fees and expenses will total a not to exceed $4,863,548. The fee estimates associated are for general budgeting purposes only and individual actual fees may be less or more than the estimates. Notwithstanding, the total cumulative fee and expenses for Tasks 1through 4, traffic counts, and miscellaneous expenses and out of town travel will not exceed $4,863,548 without prior authorization from the City.

Task - Descriptions	**Fee/Fee Type**
Task 1 - Project Development/Engineering	$3,345,300 / Hourly Not to Exceed (NTE)
Task 2 - Environmental Compliance/Document	$592,130 / Hourly Not to Exceed (NTE)
Task 3 - Public Outreach	$11,300 / Hourly Not to Exceed (NTE)
Task 4 - Project Funding Plan	$335,670 / Hourly Not to Exceed (NTE)
Traffic Counts	$150,000 /Direct Expense (NTE)
Misc. Expenses & Out of Town Travel	$429,148 / City Policy (NTE)
Total	$4,863,548

Payment will be due within 30 days of your receipt of the invoice.

Closure

In addition to the matters set forth herein, our Agreement shall include and be subject to, and only to, the executed Master Agreement for Continuing Professional Services dated December 22, 2015, which is incorporated herein by reference. As used in the Master Agreement RFQ No. 2015-213-KB, "Consultant" shall refer to Kimley-Horn and Associates, Inc., and "Client" shall refer to The City of Miami Beach.

We appreciate the opportunity to provide these services to you. Please contact me if you have any questions.

Very truly yours,

KIMLEY-HORN AND ASSOCIATES, INC.

By: Gregory S Kyle, AICP
Senior Vice President

Approved:

CONSULTANT		**CITY OF MIAMI BEACH**	
Robert A. Lepore	2/25/16		
Project Manager	Date	City Manager	Date

Master Summary

Fee by Task

CSO: #3
Project Name: Miami Beach LRT/Modern Streetcar
Task Name: Preliminary Engineering/Environmental/Public Involvement Plan/Financial Analysis
Date Prepared: 6-Feb-16

Task		Fee
Task 1 Engineering / Project Development		
1.1 Track		$636,600
1.2 Civil		$738,200
1.3 Systems		$381,400
1.4 Traffic		$325,800
1.5 Ridership		$325,400
1.6 Operation		$225,200
1.7 Vehicles		$288,400
1.8 VMSF		$205,500
1.9 AA / Planning		$218,800
	Total Fee	$3,345,300
Task 2 Environmental Compliance/Documentation		
2.1 Cultural Resources		$102,280
2.2 Noise / Vibration		$77,810
2.3 Air / Quality		$21,960
2.4 Natural / Social / Contamination/ Other		$211,080
2.5 Documentation		$179,000
	Total Fee	$592,130
Task 3 Public Outreach		
3.1 Public Involvement Plan		$11,300
	Total Fee	$11,300
Task 4 Project Funding Plan		
4.1 Screening of Revenue Options		$68,200
4.2 Forecast of Funding Options		$123,490
4.3 Assist in Development of Plan		$60,040
4.4 Assist City to Advance the Plan		$83,940
	Total Fee	$335,670
Total All Tasks Labor		$4,284,400

Total Labor	**$4,284,400**
Misc. Expenses (4.5% of Labor)	**$192,798**
Out of Town Travel Expenses (Estimated)	**$236,350**
Traffic Count Allowance	**$150,000**
TOTAL CONTRACT LIMIT	**$4,863,548**

Master Summary

Fee by Firm

CSO: #3
Project Name: Miami Beach LRT/Modern Streetcar Preliminary Engineering/Environmental/Public Involvement Plan/Financial Analysis
Task Name:
Date Prepared: 6-Feb-16

Firm	Fee [1]
Kimley-Horn	$1,763,135
HDR Engineering	$1,442,565
WSP/Parsons Brinckerhoff	$347,597
LTK Engineering	$510,489
Clary Consulting	$120,014
Boothe Transit Consulting	$75,285
Maintenance Design Group	$127,787
Shiels Obletz Johnsen	$104,025
Communikatz	$4,170
Media Relations Group	$4,096
Janus Research	$72,818
Government Services Group	$141,568
Traffic Counts (Direct Expense)	$150,000
Total	$4,863,548

Notes:
(1) Fee estimates for each firm are preliminary for budgeting purposes. As the project progresses and the scope of required activities is better defined, fees may be reallocated among the firms.

Kimley»Horn

February 12, 2016

Mr. Jose Gonzalez, P.E.
City of Miami Beach
1700 Convention Center Drive
Miami Beach, Florida 33139

RE: *City of Miami Beach Light Rail/Modern Streetcar*
Survey, Subsurface Utility Engineering, and Geotechnical

Dear Mr. Gonzalez:

Based on your request, we have summarized our approach for preparing the survey, subsurface utility engineering (SUE), and preliminary geotechnical investigation for the Miami Beach Light Rail/Modern Streetcar Project. All of these base engineering data collection services are included in Consultant Service Order #2 that has been submitted to the City of Miami Beach (City). In particular, the requirements for SUE differ significantly for a rail transit project in comparison to a traditional roadway improvement project. The additional SUE requirements for a rail transit project are explained through a series of questions and responses below.

What is Subsurface Utility Engineering (SUE)?

SUE is a branch of engineering practice that involves utility mapping, coordination, relocation design, and cost development. As part of the engineering, location of existing underground facilities must be determined. This can be accomplished to varying levels of accuracy. Types of facilities that will typically be identified include water, sanitary sewer, storm water, power, gas, communications, and other underground facilities.

Why is SUE needed for the Miami Beach Streetcar Project?

The subsurface data obtained is used to identify conflicts with the proposed tracks, develop relocation designs, facilitate coordination with utility providers, and potentially avoid conflicts through adjustment of the track alignment.

Why do we need more detailed SUE data for this project in comparison to a traditional roadway improvement project?

Varying levels of existing information for underground utilities are currently available through City's GIS databases and from private utility record drawings. Unfortunately, these data are often unreliable and do not provide sufficient accuracy to determine conflicts. It is typical for rail transit projects to include a comprehensive data collection program for utilities to facilitate relocation design required from the introduction tracks in the roadway.

Since it is not feasible to physically uncover every underground utility to determine exact location, other less obtrusive means are employed. Typically, record drawings, as-built plans and GIS databases are compiled and used as a basis for supplemental field investigations. Field investigations involve a combination of non-destructive methods for first confirming horizontal location

in two dimensions. Two-dimensional ground penetrating radar (GPR) and physical excavations are then used to verify depth at specific locations. The physical excavations, or "soft digs", are only performed once an actual conflict has been identified between an existing utility and a proposed design element. This means that soft digs are not coordinated and performed until later in the design process, requiring a second mobilization for utility data collection.

The biggest limitation of this method of subsurface utility data collection is that accurate depth information is only collected at specific points along a corridor, and not continuously along a corridor. Another limitation is that typically only known and active utilities are investigated and identified.

What is different about our SUE approach?

Our team plans to utilize three-dimensional tomographic imaging radar (3D scanning) to provide a higher accuracy collection of subsurface data. Information on horizontal and vertical location is collected continuously throughout the entire scan area, providing for the creation of 3D existing utility model, which depicts known, unknown and abandoned facilities. Using the data collected from 3D scanning, the team will prepare an AutoCAD Civil 3D utility model for use in preliminary and final design.

By collecting comprehensive, continuous, and accurate horizontal and vertical information at this early stage of the project, the amount of soft digs typically performed is reduced by approximately 90%, and saves valuable time later in design.

What are the benefits of our SUE approach?

By getting better subsurface data earlier in the process, we can realize the following benefits:

- Accelerate schedule and realize cost savings from eliminating second round of utility data collection (soft digs).
- Minimizes disruption to the public from soft digs.
- Cost savings through utilization of more accurate data to adjust track alignment and avoid significant conflicts.
- In a P3 procurement, providing utility data with a higher level of accuracy will allow the concessionaires to reduce contingency that would otherwise be included in their Guaranteed Maximum Price (GMP). Relocation of underground utilities resulting from discovery of unforeseen conditions is the most common source of change orders and claims in street running rail transit construction. Reduction in this risk to the concessionaires will result in significant savings in project costs and the future availability payments.

Very truly yours,
KIMLEY-HORN AND ASSOCIATES, INC.

Robert Lepore, P.E.
Project Manager
bob.lepore@kimley-horn.com

Attachment 5

Kimley»Horn

February 5, 2016

Kathie Brooks
Assistant City Manager
City of Miami Beach
1700 Convention Center Drive
4th Floor (City Manager's Office)
Miami Beach, Florida 33139

RE: Consultant Agreements Clarification

Dear Kathie:

This letter is intended to provide the City of Miami Beach clarification and assurance that Kimley-Horn and Associates, Inc. (KHA) and Parsons Brinckerhoff (PB) are in full agreement on the roles and responsibilities of both firms for the Miami Beach Modern Streetcar project. KHA is the Prime Consultant and PB is one of the key sub-consultants on the project team. For the current and pending work authorizations, PB will be providing services for the following tasks:

1. Initial Industry Forum Support
2. Assistance with the Strategic Development of the Program
3. Ridership/Travel Demand Forecasts
4. Noise and Vibration Analysis
5. Air Quality

It is further understood that PB will have a key role in the upcoming P3 Procurement Task that is envisioned to be negotiated in the near future. We sincerely hope this letter clarifies that both KHA and PB are committed to the City of Miami Beach and the success of this exciting program. Our firms have successfully teamed together on many projects throughout the nation and we will both bring out best resources to the City to ensure the success of your program. Please call either of us if you have any questions.

Sincerely,

R. Russell Barnes, III, P.E.
Principal

George W. Walton, P.E.
Parsons Brinckerhoff
Southeast Operations Manager